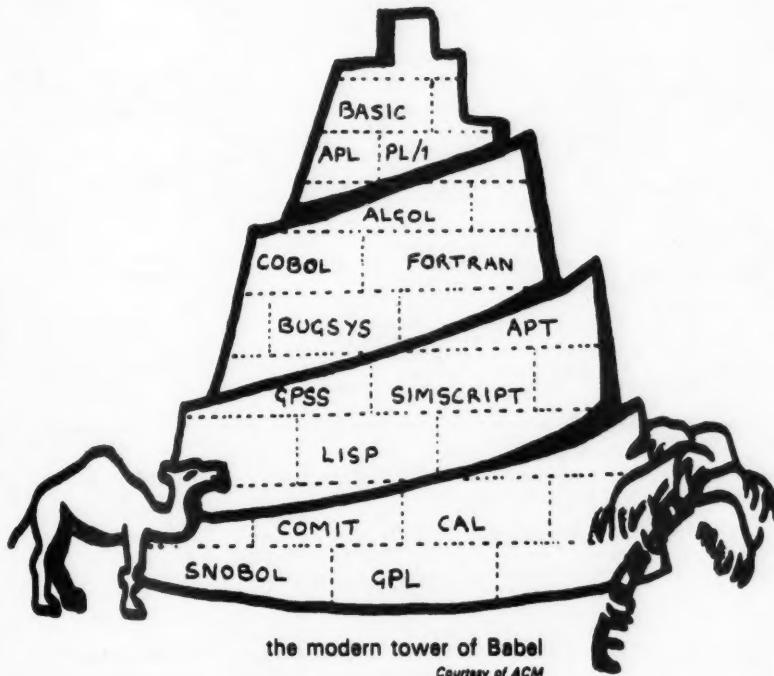


COMPUTER LANGUAGES

VOLUME 19 1993

LIST OF CONTENTS AND AUTHOR INDEX



PERGAMON PRESS

Oxford · New York
Seoul · Tokyo

COMPUTER LANGUAGES

computer languages

Editor-in-Chief: Robert S. Ledley

c/o National Biomedical Research Foundation, Georgetown University Medical Center,
3900 Reservoir Road, N.W., Washington, DC 20007, U.S.A.

Managing Editor: Blaire V. Mossman

P.O. Box 13177, Scottsdale, AZ 85267-3177, U.S.A.

Editorial Advisory Board

Paul Abrahams
214 River Road
Deerfield, MA 01342

Frances E. Allen
IBM Watson Research
Center
Yorktown Heights
NY 10598

Jean-Loup Baer
University of Washington
Seattle, WA 98195

David T. Barnard
Queen's University
Kingston, Ontario
Canada K7L 3N6

J. G. P. Barnes
SPL International Research
Center
Abingdon OX14 3LZ
England

Annalisa Bossi
Università di Padova
35131 Padova, Italy

Ronald F. Brender
Digital Equipment Corp.
Nashua, NH 02061

John C. Cherniavsky
CISE/OCDA
Washington, DC 20550

Peter J. Denning
George Mason University
Fairfax, VA 22030-4444

Patrick C. Fischer
Vanderbilt University
Nashville, TN 37240

Gerald Fisher
New York University
NY 10012

Arthur C. Fleck
The University of Iowa
Iowa City, IA 52242

Ivan Flores
441 Redmond Road
South Orange, NJ 07079

Narain Gehani
Bell Laboratories
Murray Hill, NJ 07974

Richard Hamlet
Portland State University
Portland, OR 97207-0751

Edgar T. Irons
139 Grunmann Hill Road
Wilton, CT 06897

Peter Lucas
Technical University Graz
A-8010 Graz
Austria

Herbert Maisel
Georgetown University
Washington, DC 20007

Isaac R. Nassi
Apple Computer
Cupertino
CA 95014

Robert Paige
CIMS
New York, NY 10012

Chan M. Park
Catholic University of
America
Washington, DC 20064

C. V. Ramamoorthy
University of California
Berkeley, CA 94720

Joachim W. Schmidt
University of Hamburg
D-2000 Hamburg 54
Germany

Herbert Schorr
IBM Watson Research
Center
Yorktown Heights
NY 10598

Jack Schwartz
New York University
NY 10012

Mary Lou Soffa
University of Pittsburgh
Pittsburgh, PA 15260

Seldon L. Stewart
National Institute of
Standards and
Technology
Washington, DC 20234

Stanley Y. W. Su
Florida University
Gainesville, FL 32611

Kuo-Chung Tai
North Carolina State
University
Raleigh, NC 27695-8206

Robert D. Tennent
Queen's University
Kingston, Ontario
Canada K7L 3N6

Allen B. Tucker
Bowdoin College
Brunswick, ME 04011

Charles Wetherell
Ardent Computer
Santa Clara, CA 95051

John R. White
Xerox Palo Alto
Research Center
Palo Alto, CA 94304

Raymond T. Yeh
International Software
Systems Inc.
Austin, TX 78759

Marvin V. Zelkowitz
University of Maryland
College Park, MD 20742

Production Office

Pergamon Press Ltd, Pergamon House, Bampfylde Street, Exeter EX1 2AH, England [Tel. Exeter (0392) 51558;
Fax (0392) 425370].

Subscription and Advertising Offices

North America: Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.

Rest of the World: Pergamon Press Ltd, Headington Hill Hall, Oxford OX3 0BW, England
[Tel. Oxford (0865) 794141].

Subscription Rates

Annual Institutional Subscription Rates 1994: North, Central and South America, US\$445.00, Rest of World £288.00.
Sterling prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

Back Issues

Back issues of all previously published volumes, in both hard copy and on microform are available direct from Pergamon Press offices.

Second class postage paid at RAHWAY NJ. Postmaster send address corrections to *Computer Languages*, c/o Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.

Volume 19 published quarterly in January, April, July and October.

Copyright © 1993 Pergamon Press Ltd

computer languages

CONTENTS OF VOLUME 19

Number 1

Tom Axford and Mike Joy 1 List processing primitives for parallel computation

Roberto Ierusalimschy 19 A denotational approach for type-checking in object-oriented programming languages

Wai-Mee Ching, Paul Carini and Dz-Ching Ju 41 A primitive-based strategy for producing efficient code for very high level programs

Domenico Talia 51 Distributed termination of concurrent processes in Occam

Number 2

ICCL '92

James R. Cordy and Mario Barbacci 63 Introduction to the special issue on ICCL '92

R. Nigel Horspool and Jan Vitek 65 Static analysis of PostScript code

Uday S. Reddy and Samuel N. Kamin 79 On the power of abstract interpretation

Peter J. Thiemann 91 Optimizing structural recursion in functional programs

Keith D. Cooper, Mary W. Hall and Ken Kennedy 105 A methodology for procedure cloning

Laurie J. Hendren and Guang R. Gao 119 Designing programming languages for the analyzability of pointer data structures

Angelika Zobel 135 Program structure as basis for the parallelization of global register allocation

Number 3

Andrew Malton 157 The denotational semantics of a functional tree-manipulation language

R. Venugopal and Y. N. Srikant 169 Heuristic chaining in directed acyclic graphs

eva Kühn, Herbert Pohlai and Franz Puntigam 185 Concurrency and backtracking in Vienna Parallel Logic

S. Mansoor Sarwar 205 Run-time behavior of SASL programs: a performance study

Number 4

Kyung-Goo Doh and
David A. Schmidt 213 Action semantics-directed prototyping

Young K. Nam and
Lawrence J. Henschen 235 A controlling scheme for Prolog through count terms

Gwen Clarke and
David T. Barnard 247 Error handling in a parallel LR substring parser

M. A. Bassiouni,
M. J. Llewellyn
and A. Mukherjee 261 Time-based operators for relational algebra query languages

AUTHOR INDEX

Axford T., 1
Barbacci M., 63
Barnard D. T., 247
Bassiouni M. A., 261
Carini P., 41
Ching W.-M., 41
Clarke G., 247
Cooper K. D., 105
Cordy J. R., 63
Doh K.-G., 213
Gao G. R., 119
Hall M. W., 105
Hendren L. J., 119
Henschen L. J., 235
Horspool R. N., 65
Ierusalimschy R., 19
Joy M., 1
Ju D.-C., 41
Kamin S. N., 79
Kennedy K., 105
Kühn e., 185
Llewellyn M. J., 261
Malton A., 157
Mukherjee A., 261
Nam Y. K., 235
Pohlai H., 185
Puntigam F., 185
Reddy U. S., 79
Sarwar S. M., 205
Schmidt D. A., 213
Srikant Y. N., 169
Talia D., 51
Thiemann P. J., 91
Venugopal R., 169
Vitek J., 65
Zobel A., 135

